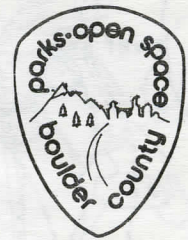


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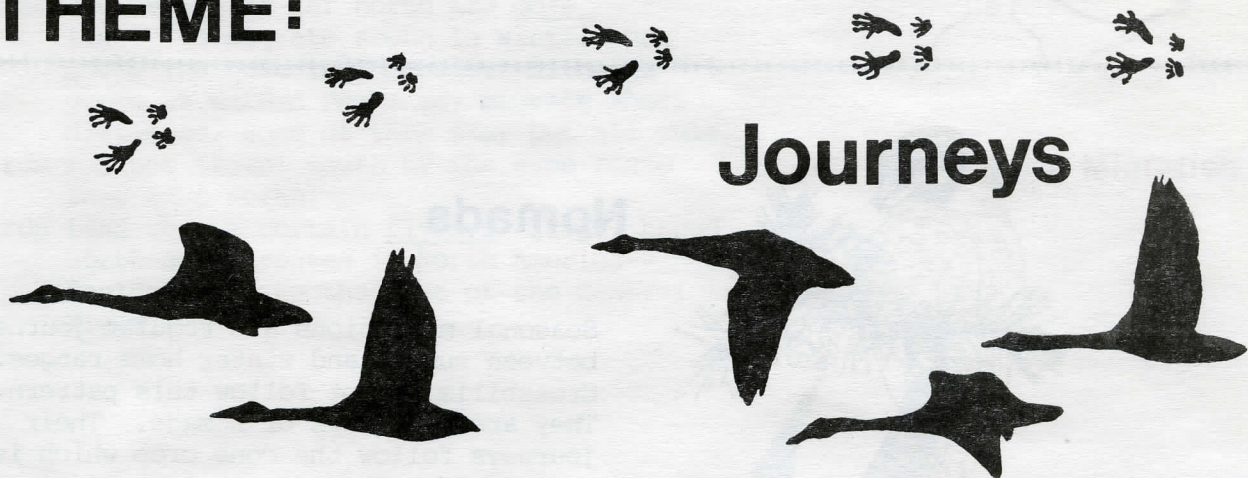


Nature Detectives

"Who's been here?" "What were they doing and why were they doing it?" "When did it happen?" Nature Detectives try to answer questions like these by looking for clues and evidence of the activities of creatures in the outdoors.

Have you ever wondered about teeth marks on the trunk of a tree, or strange footprints in the snow or mud? If you have, then you are already a nature detective.

THEME:



Journeys

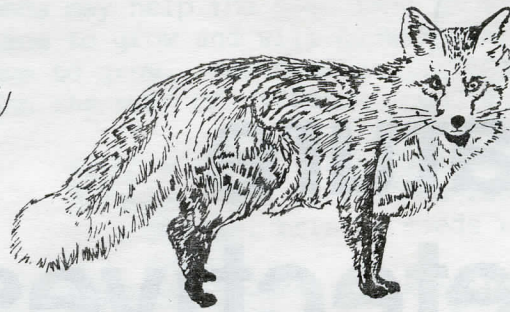
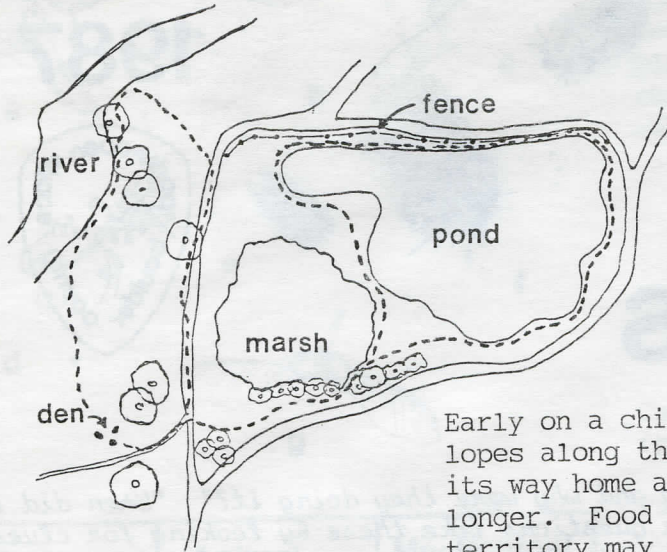
Summer is over! Did you have a good vacation? Did you camp or hike in a forest? Did you stay with friends or relatives in another state? Did you go to the ocean? People are the only animals that make journeys just for fun. Many animals travel for different reasons, but they don't travel for a holiday!

Here are some kinds of animal journeys:

- Nighttime food hunts
- Daytime food hunts
- Journeys by young animals to find new living space to raise families
- Once-in-a-lifetime journeys to mate
- Wanderings in no fixed direction to find food

What do these travels have in common? Whether a short trip across a meadow or a global jaunt from pole to pole, they are all journeys to living space with enough food to feed individual animals and their families to come. Let's look more closely at some of these journeys.

Always Hunting Season



Early on a chilly, wintery morning, a shadowy shape lopes along the margin of a frozen pond. A red fox makes its way home after a hunting journey. Winter trips are longer. Food is hard to find. The home range or hunting territory may expand to 5-10 miles across. In summer only about 2 miles is needed because the fox's map is full of smells, including its own scent markings. And it gets to know the landmarks of the territory--river banks, ditches, trees, hillsides, weed patches--just like you learn the way to school or a friend's house.

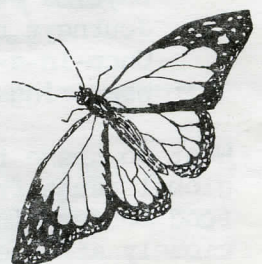


Nomads

Seasonal migrations are regular journeys between summer and winter home ranges. Crossbills do not follow this pattern. They are wanderers or nomads. Their journeys follow the cone crop which is their food. They travel over large areas of forest to find the year's best cones. They may never retrace their route but will nest wherever they find enough seeds to feed their families.

Monarch Migration

Butterflies with leg bands. . .that's ridiculous! But scientists can mark butterflies with labels pasted on their wings. This is how the migration of monarch butterflies was tracked. Monarchs move between their summer ranges as far north as the Great Lakes and Canada, to wintering areas in California and Mexico, a journey of about 1250-1850 miles (2000-3000 km). An individual butterfly probably won't make the entire trip. More likely, the butterfly will lay eggs on milkweed plants on the way north. The eggs will hatch into hungry caterpillars which eat and grow until they are ready to change into butterflies which will continue the journey north--a trip of amazing instinct!



Studying Bird Journeys

Scientists learn about bird journeys, migrations, by marking many birds and studying where they are seen again. Birds are caught, unharmed, in mist nets or live traps. The birds are weighed, measured, and banded--a light metal or plastic band with date and locality information is attached to the leg. The birds are released to continue their travels. The information is collected if the same birds are found again. If you ever find a dead bird wearing a band, you can be part of the study by returning the band as instructed on the band. Do not remove bands from live birds. By banding many birds of different kinds over the years, scientists have learned:

Some birds migrate short distances from mountains to prairies.

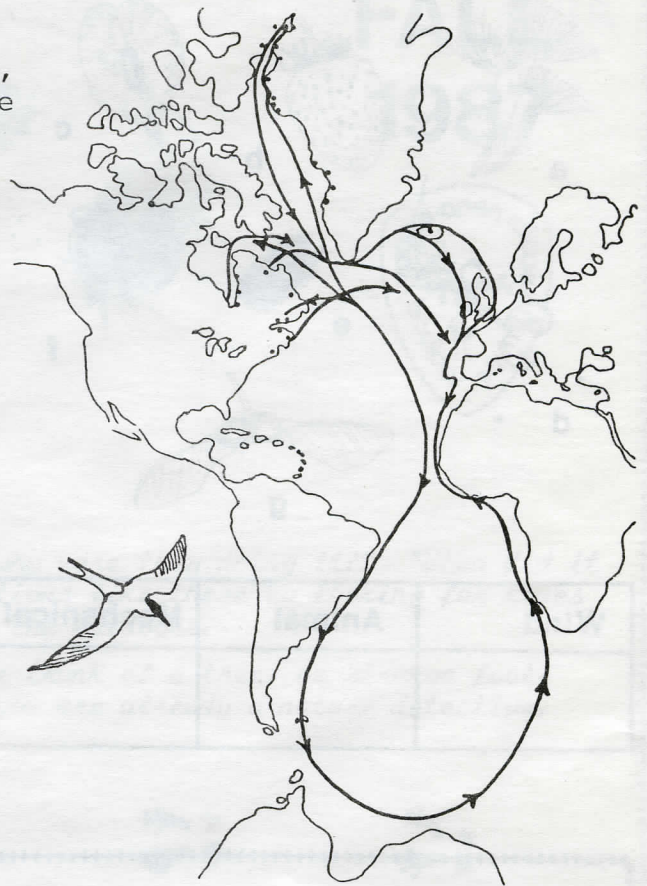
Arctic terns fly from Arctic nesting areas to spend winters in the Antarctic (southern) oceans.

Rufous hummingbirds nest in the Rockies and winter in Mexico.

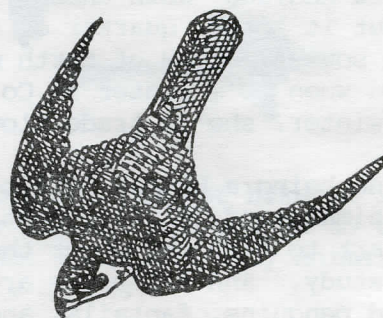
Canada geese in the far north are more likely to migrate south in winter than geese who nest in Colorado. Although geese at Walden Ponds may migrate short distances, some of them stay put all year.

Birds may not travel south by the same route they take north.

Birds tend to use certain flyways--large, broad north-south routes in North America--Boulder lies to the west of the Central Flyway.



Arctic Tern Migration



World Class Records

Longest migration by a mammal: Grey Whale, 6000 miles (10,000 km) one way.

Longest migration by a bird: Arctic Tern, 14,000 miles (22,500 km) one way.

Fastest marine mammal: Killer Whale, 34.5 miles per hour (55.5 km/h).

Fastest land mammal: Cheetah, 54 miles per hour (40 km/h) in 3 seconds.

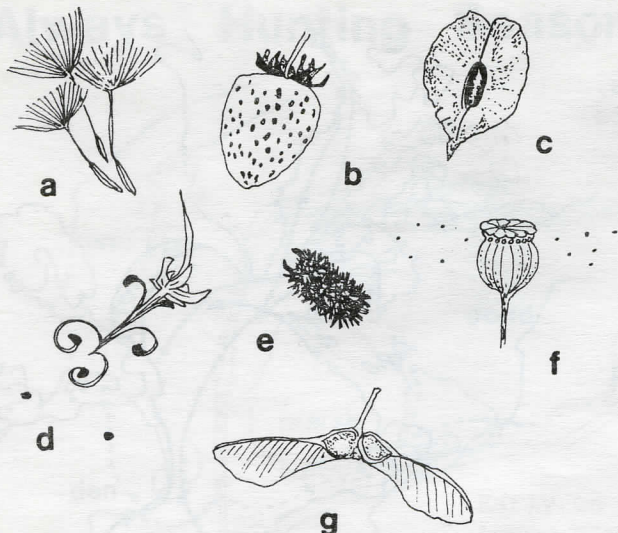
Slowest land mammal: Three-toed Sloth, 0.068 miles per hour--less than 2 meters in a minute!

Slowest flying bird: American Woodcock, 5 miles per hour (8 km/h).

Fastest animal in any category: Peregrine Falcon, descending at a 45° angle, 217 miles per hour (350 km/h)!

From: The Guinness Book of Animal Fact and Feats, 3rd ed., 1982

Dispersal Game



Even plants make journeys. Not many grown-up plants can move, but the tumbleweed does. It barrels across the prairie in the strong wind, scattering seeds as it travels. Spreading the seeds may help the seed land in a favorable place to grow and will give seedlings more room to grow. Seeds often disperse or spread with the help of different forces, such as:

Wind--winged or fluffy seeds;

Animal--seeds carried as food or in droppings, bristly seeds which stick to fur;

Mechanical--seeds shaken or flung from pods.

Can you match the seeds with their dispersal forces? Put the seed's letter in the correct box.

Fall is a good time of year to make a seed collection. Include all kinds of seeds, and see if you can guess how they disperse. Try a meadow hike wearing an old pair of socks over your sneakers. See what you pick up on the way!

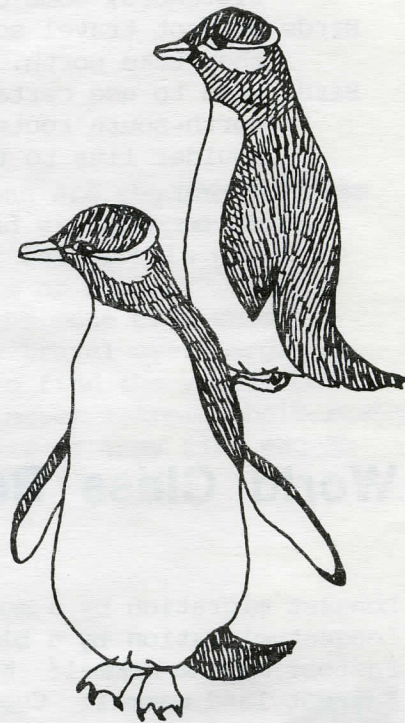
Wind	Animal	Mechanical

Detective "Down Under"

Speaking of long global journeys, Chief Nature Detective Ann Cooper is currently writing articles from New Zealand. Not only is New Zealand "down under" in the Southern Hemisphere, but it lies a quarter of the way around the world. Being south instead of north means it's summer in New Zealand when it's winter in Colorado. When Ann returns this winter, she'll trade flowers for snow.

Can you imagine being a Nature Detective in a place where most of the animals and plants are strange and new to you? How do you start to find out about them? You look, explore, and study. Ann's letters are rich with descriptions of yellow-eyed penguins, fantails, and parrots. She hikes in forests (called bush) where trees are clothed with mosses, ferns, and fragrant orchids, and walks on beaches where the treasures change daily.

Hi, Ann--it will soon be fall here--happy spring to you!



NATURE DETECTIVES: Saturday, October 17--meet at Walden Ponds to explore journeys. See Images Calendar for details.

a	c	g
b	e	d
f		
Wind	Animal	Mechanical